IN THE CLAIMS:

1.-18. (Cancel)

19. (Currently Amended) A magnetic recording sensor having a structure comprising a plurality of cells in parallel including a magnetoresistive sensor for recording information, a bit line connected to the magnetoresistive sensor for flowing an electric current to the sensor, a word line in the position opposite the bit line by interposing therebetween the magnetoresistive sensor layer and in the position away from the magnetoresistive sensor layer for performing recording operation onto the magnetoresistive sensor layer orthogonally to the bit line, an amplifying system for amplifying a read signal, and a read word line for switching between read and write, wherein the magnetoresistive sensor comprises the magnetoresistive sensor layer, and a layer for magnetic domain-controlling the magnetoresistive sensor layer is provided with the magnetic domain control layer having high electric resistivity according to any one of the magnetoresistive sensor including a substrate, a pair of magnetic shield layers consisting of a lower magnetic shield layer and an upper magnetic shield layer, a magnetoresistive sensor layer disposed between the pair of magnetic shields, an electrode terminal for flowing a signal current perpendicular to the plane of the magnetoresistive sensor layer, and magnetic domain control layers for controlling Barkhausen noise of said magnetoresistive sensor layer, wherein said magnetic domain control layers disposed on opposite ends of the magnetoresistive sensor layer in a region from an end surface of a media-opposed surface side of the magnetoresistive sensor layer to a depth position are made of a material having a

specific resistance not less than 10 mOcm, and are in contact with at least opposite end surfaces of said magnetoresistive sensor layer in said region.

20. (New) A magnetic recording sensor comprising:

a plurality of cells in parallel including a magnetoresistive sensor for recording information;

a bit line connected to the magnetoresistive sensor for flowing an electric current to the sensor;

a word line in the position opposite the bit line by interposing therebetween the magnetoresistive sensor layer and in the position away from the magnetoresistive sensor layer for performing a recording operation onto the magnetoresistive sensor layer orthogonally to the bit line;

an amplifying system for amplifying a read signal; and

a read word line for switching between read and write,

wherein the magnetoresistive sensor comprises the magnetoresistive sensor layer, and magnetic domain control layers disposed on opposite ends of the magnetoresistive sensor layer, and

said magnetic domain control layers have a compound having a composition of R_2O_3 containing at least R (R= Fe, Co, Mn, and Ni) and oxygen (O) and has a spinel lattice and a (400) orientation plane.

21. (New) A magnetic recording sensor according to clam 20,

wherein a material consisting of a oxide underlayer of said magnetic domain control layer is a compound of RO consisting of at least R(R=Co, Mg, Ni, Eu, Fe, and Zn) and oxygen (O) and has a NaCl structure and a (200) orientation plane, and

a material consisting of said magnetic domain control layer on the oxide underlayer is a compound having a composition of R_2O_3 containing at least R (R= Fe, Co, Mn, and Ni) and oxygen (O) and has a spinel lattice and a (400) orientation plane.

22. (New) A magnetic recording sensor according to claim 20,

wherein magnetic domain control layer comprises the compound layer disposed in contact with opposite ends of said magnetoresistive sensor layer, and a hard magnetic layer disposed outside the same, and

said hard magnetic layer is made of a metal magnetic material having as the composition elements Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Ni (niobate).

23. (New) A magnetic recording sensor comprising:

a plurality of cells in parallel including a magnetoresistive sensor for recording information;

a bit line connected to the magnetoresistive sensor for flowing an electric current to the sensor;

a word line in the position opposite the bit line by interposing therebetween the magnetoresistive sensor layer and in the position away from the

magnetoresistive sensor layer for performing recording operation onto the magnetoresistive sensor layer orthogonally to the bit line;

an amplifying system for amplifying a read signal; and

a read word line for switching between read and write,

wherein the magnetoresistive sensor comprises the magnetoresistive sensor layer, and magnetic domain control layers disposed on opposite ends of the magnetoresistive sensor layer,

said magnetic domain control layers have a material that is granular layer made by mixing a hard magnetic material having high coercivity made of a metal magnetic material having as the composition elements Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobate) with an insulating material made of Al_2O_3, SiO_2, HfO_2, TaO_2, TiO_2, Ta_2O_5, AlN, AlSiN, or ZrO_2.

24. (New) A magnetic recording sensor comprising according to claim 23,

wherein magnetic domain control layer comprises the granular layer disposed in contact with opposite ends of said magnetoresistive sensor layer, and a hard magnetic layer disposed outside the same, and

said hard magnetic layer is made of a metal magnetic material having as the composition elements Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Ni (niobate).